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MODERN WORLD WITH ELECTRIC CARS - TESLA INCORPORATION

Nowadays technologies are developing significantly fast and new inventions are introduced to people all over the world. Due to the fact that environment is suffering from carbon emissions, deforestation and other humans' harmful actions, a lot of scientists are trying hard to reduce that negative impact by implementing technologies that would not pollute the environment so much and would be much more efficient in use or in manufacturing. It is believed though that electric cars will substitute cars that work on fuel. Modern electric cars are not less powerful than cars with combustion engines both in speed and acceleration amount. They are reliable, economical and safe in operation. With every year the maximum range of an electric car is increasing and its battery charging time is decreasing.

Solving the problem of environmental safety, the government encourages people to switch to electric cars by creating some advantages for people who use them. One of the most popular corporations that develops and assembles such kind of cars is Tesla.

The company was established in 2003 by Martin Eberhard, Marc Tarpenning, Jeffrey B. Straubel and Ian Wright. In the first major sale of shares a successful businessman Elon Musk joined it as a Chairman of the Board in February 2004. Elon Musk wanted to demonstrate to the whole world that beautiful, dynamic electric vehicles with a large range on one battery charge are not a fiction. The presentation of high-class electric vehicle (fashionable, stylish) was necessary for the rapid development from zero level and entry to the world consumer market. Therefore, the first model has become a two-seater electric sports car Tesla Roadster, introduced in August 2006, which design was borrowed from another, more famous model Lotus

Elise. However, all the components were developed by the company staff with Elon Musk taking part in designing of each element [1].

To start up mass production of Tesla Roadster initially scheduled for September 2007, Tesla Motors had been continuously looking for new investors, including Compass Technology Partners, SDL Ventures, Valor Equity Partners, co-founders of Google Sergey Brin and Larry Page, the former president of eBay, Jeffrey Skoll and others. The amount of investment in Tesla Motors by 2007 has exceeded \$ 105 million, and by the time the first production version left the assembly line in 2008, has reached \$ 140 million (instead of the planned \$ 25 million). In early August 2009, the company announced the overall profitability for the month of July and making a profit of 1 million dollars, and 4 years later in May 2013 the company was the first and the only one of the automobile companies to repay a loan of 465 million dollars, obtained from the US Department of Energy [1].

Currently, the vehicle line of the electric car manufacturer consists of three different not only in their appearance, but by function and purpose cars: sport car Tesla Roadster, hatchback Tesla, Model the S, crossover Tesla Model X. By the technical characteristics two versions of a sports car can be distinguished: Tesla Roadster (2008) and Tesla [1].

Roadster Sport (2009). The electric vehicle is driven by three-phase four-pole electric motor. Thrust is transmitted to the wheels of the rear axle via a single-stage transmission developed by BorgWarner Company. Upgrading concerned the engine, increasing the torque and acceleration time of 0.2 s. In the passenger compartment of Tesla Roadster Sport the aluminum gearbox lever gave way to key operated mechanism; the color touch screen appeared on the center console, and high-quality leather and carbon fiber insertions were used in the interior trim [2].

In conclusion, taking into consideration everything said, Tesla is undoubtedly a very successful company and a rapid development of the company has been provided not only due to the name of the most mysterious, and prominent inventor Nicola Tesla and huge financial investment, but also due to the competent innovation policy

in creating and promoting their electric vehicles in the global market with a long-term strategic goal to create affordable costs of electric vehicles [3].

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